Updated December 29, 2020
DOH 820-117

Interim Supplemental Guidance for Prioritization of N95 and Other Respirators in Inpatient Hospitals During Times of Supply Shortage

Healthcare personnel (HCP) should wear personal protective equipment (PPE) according to standard precautions, universal source control by wearing a facemask, universal eye protection, and any additional transmission-based precautions based on diagnosis or symptoms. Infection Control Guidance for Healthcare Professionals about Coronavirus (COVID-19) from the Centers for Disease Control and Prevention (CDC) recommends wearing a NIOSH-approved N95 or equivalent or higher-level respirator (or facemask if a respirator is not available), gown, gloves, and eye protection when caring for or entering the patient room of a patient with known or suspected COVID and during aerosol generating procedures.

Hospitals should follow CDC's:

- Infection Control Guidance for Healthcare Professionals about Coronavirus (COVID-19)
- Using Personal Protective Equipment (PPE)
- Optimizing Personal Protective Equipment (PPE) Supplies

While CDC recommends a NIOSH-approved N95 or equivalent or higher-level respirator (including other classes of filtering facepiece respirators, elastomeric half-mask and full facepiece air purifying respirators, and powered air purifying respirators), the recommendations acknowledge the current challenges with limited supplies of N95s and other respirators. Facilities should implement strategies to optimize current PPE supply ***even before shortages occur***. One strategy to optimize supply of N95 and other respirators is to prioritize N95 and alternative respirators for use in particular scenarios identified for higher prioritization based on patient characteristics, the exposure anticipated by the HCP, and occupational health requirements. This guidance provides one approach for acute care hospitals to prioritization of N95 and other respirators and should be based on the organizational risk assessment.

Conventional, Contingency, and Crisis Capacity

Facilities should follow CDC's PPE optimization strategy which offers a continuum of options using the framework of surge capacity when PPE supplies are stressed, running low, or absent. When using these strategies, healthcare facilities should:

- Consider these options and **implement them sequentially.**
- Understand their current PPE inventory, supply chain, and utilization rate.

- Train healthcare personnel on PPE use and have them demonstrate competency with donning and doffing any PPE ensemble that is used to perform job responsibilities.
- As PPE availability returns to normal, promptly resume standard practices.

Conventional capacity: measures consisting of engineering, administrative, and PPE controls that should already be implemented in general infection prevention and control plans in healthcare settings.

Contingency capacity: measures that may be used temporarily during periods of anticipated PPE shortages. Contingency capacity strategies should only be implemented after considering and implementing conventional capacity strategies. While current supply may meet the facility's current or anticipated utilization rate, there may be uncertainty if future supply will be adequate and, therefore, contingency capacity strategies may be needed. Using reusable PPE can support availability of needed supply when disposable PPE is in short supply.

Crisis capacity: strategies that are not commensurate with U.S. standards of care but may need to be considered during periods of known PPE shortages. Crisis capacity strategies should only be implemented after considering and implementing conventional and contingency capacity strategies. Facilities can consider crisis capacity strategies when the supply is not able to meet the facility's current or anticipated utilization rate. Using reusable PPE can support availability of needed supply when disposable PPE is in short supply.

Decisions to implement contingency and crisis strategies are based upon these assumptions:

1. Facilities understand their NIOSH-approved respirator inventory and supply chain.
2. Facilities understand their NIOSH-approved respirator utilization rate.
3. Facilities are in communication with local healthcare coalitions and federal, state, and local public health partners (e.g., public health emergency preparedness and response staff) to identify additional supplies.
4. Facilities have already implemented other engineering and administrative control measures including:
    - Use physical barriers and other engineering controls
    - Limit number of patients going to hospital or outpatient settings
    - Use telemedicine whenever possible
    - Limit all HCP not directly involved in patient care
    - Limit face-to-face HCP encounters with patients
    - Limit visitors to the facility to those essential for the patient's physical or emotional well-being and care (e.g., care partner, parent)

- Cohort patients and/or HCP

5. Facilities have provided HCP with required education and training, including having them demonstrate competency with donning and doffing, with any PPE ensemble that is used to perform job responsibilities, such as provision of patient care.

Checklists for Implementing Strategies for Optimizing N95 Respirators

For details please refer to CDC's Strategies for Optimizing the Supply of N95 Respirators

Implemented	Not Yet Implemented	
Conventional Capacity Strategies (should be incorporated into everyday practices)		
Engineering Controls		
		Selective use of airborne infection isolation rooms
		Use of physical barriers
		Properly maintained ventilation systems
Administrative Controls		
		Limit number of patients going to hospital or outpatient settings
		Telemedicine
		Exclude all HCP not directly involved in patient care
		Limit face-to-face HCP encounters with patient
		Exclude visitors to patients with known or suspected COVID-19
		Source control
		Cohorting patients
		Cohorting HCP
		Training on indications for use of N95
		Training on use of N95 respirators
		Just-in-time fit testing
		Limiting respirators during training
		Qualitative fit testing
Personal Protective Equipment		
		N95 respirators used in occupational settings are approved by the National Institute for Occupational Safety and Health (NIOSH) and used in accordance with OSHA standards (i.e., disposed of after each patient encounter.
		Use NIOSH approved alternatives to N95 respirators where feasible, including other classes of filtering facepiece respirators, elastomeric half-mask and full facepiece air purifying respirators, powered air purifying respirators (PAPR).

Contingency capacity strategies should only be implemented after considering and implementing conventional capacity strategies. While current supply may meet the facility's

current or anticipated utilization rate, there may be uncertainty if future supply will be adequate and therefore, contingency capacity strategies may be needed.

Implemented	Not Yet Implemented	
Contingency Capacity Strategies – when shortages are anticipated		
Administrative Controls		
		Decrease length of hospital stay for medically stable patients with COVID-19
		Temporarily suspend annual fit-testing
Personal Protective Equipment		
		Use of N95 respirators beyond the manufacturer-designated shelf-life for training and fit-testing
		Extended use of N95 respirators

Crisis capacity strategies should only be implemented after considering and implementing contingency capacity strategies. Crisis capacity strategies are further divided into strategies for when supplies are running low and strategies for when the facility is out of N95 respirators.

Implemented	Not yet Implemented	
Crisis Capacity Strategies – during known shortages		
Personal Protective Equipment		
		Use respirators beyond the manufacturer-designated shelf life for healthcare delivery
		Use of respirators approved under standards used in other countries that are similar to NIOSH-approved respirators
		Limited re-use of N95 respirators
		Use of additional respirators beyond the manufacturer-designated shelf life for healthcare delivery that have not been evaluated by NIOSH
Crisis Capacity Strategies – no respirators left		
Administrative Controls		
		Exclude HCP at increased risk for severe illness from COVID-19 from contact with known or suspected COVID-19 patients
Engineering Controls		
		Portable fan devices with high-efficiency particulate air (HEPA) filtration that are carefully placed can increase the effective air changes per hour of clean air to the patient room, reducing risk to individuals entering the room without respiratory protection. NIOSH has developed guidance for using portable HEPA filtration systems to create expedient patient isolation rooms. In the absence of any remaining

		supply of N95 respirators, it may be possible to use this technology in conjunction with HCP wearing facemasks.
		NIOSH has developed the ventilated headboard that draws exhaled air from a patient in bed into a HEPA filter, decreasing risk of HCP exposure to patient-generated aerosol. This technology consists of lightweight, sturdy, and adjustable aluminum framing with a retractable plastic canopy. The ventilated headboard can be deployed in combination with HEPA fan/filter units to provide surge isolation capacity. In the absence of any remaining supply of N95 respirators, it may be possible to use this technology in conjunction with HCP and/or patients wearing facemasks.

Decisions to implement contingency and crisis strategies are based upon these assumptions:

N95 Prioritization in Contingency and Crisis Optimization Strategies

Facilities that do not have a sufficient supply of N95 respirators to allow use of an N95 (or other classes of filtering facepiece respirators, elastomeric half-mask and full facepiece air purifying respirators, powered air purifying respirators) for all care of patients with known or suspected COVID-19 may prioritize N95 use for patients and activities that have higher prioritization, using facemasks for all other patient care, according to the organizational risk assessment. Once availability of supplies is reestablished, the use of N95 (or equivalent or higher-level) respirators should resume.

Facilities/organizations may use this chart to prioritize their respirator use and maintain supply. Category 1 represents the highest priority for respirator use and should be prioritized, while 5 represents lower priority when respirators are in short supply. Respirators may be sequentially prioritized from highest to lowest priority category. This prioritization is flexible, and facilities may move both directions as indicated by their organizational risk assessment and as supply allows.

N95 (or equivalent or higher-level) Respirator Prioritization for Hospitals in Contingency or Crisis Levels of PPE Optimization		
	All patients with suspected or confirmed COVID-19	**All patients at potential risk**
High Priority activities*	1	2[1]
Medium Priority activities**	2	3
All patients	2	4
Conventional use (single use)		5

Category 1: Respirator use should be prioritized for use with high priority activities*.

[1] The priority for this category depends on community transmission rates. Consider raising the priority of respirator allocation to this category in the setting of widespread community transmission.

Category 2: Facilities should conduct an organizational risk assessment to determine which or any combination of the different shaded categories of number 2 should be prioritized for respirator use.
Category 3: If supply allows use of respirators to include all of category 1 and 2 uses, then facilities should consider expanding respirator use to include medium priority activities**.
Category 4: If supply allows use of respirators to include all of category 1, 2, and 3 uses, facilities should consider expanding respirator use to all patients in all clinical settings. Facilities should conduct an organizational risk assessment to determine what locations, if any, should be prioritized (e.g., ED, inpatient areas where higher-risk activities* are common, etc.).
#5: If supply allows for use in all the above categories, consider moving to conventional strategies including implementing single use of N95 respirators.

In addition to providing required education and training, including having HCPs demonstrate competency with donning and doffing, facilities should develop and implement a plan to inform staff on activities for which N95 or other respirators will be prioritized.

*High Priority Activities:

These are examples of activities where respirator use should be prioritized, based on recommendations from CDC and occupational health requirements from DOSH. This list is not comprehensive. Additional high priority activities should be determined by the organizational risk assessment

- open suctioning of airways
- sputum induction
- cardiopulmonary resuscitation
- endotracheal intubation and extubation
- non-invasive ventilation (e.g., BiPAP, CPAP)
- bronchoscopy
- manual ventilation
- nebulizer administration*
- high flow O2 delivery (over 10L/min)
- collecting or handling specimens from known or suspected COVID-19 patients including nasopharyngeal specimen collection or other nasal specimen collection
- Certain autopsy activities as described by OSHA

**Medium Priority Activities

This list of medium-priority activities may include combinations of these procedures. This list is not comprehensive but derived from multiple professional organization recommendations.

- EEG or other procedures with long exposures to head and neck area
- ENT procedures, certain respiratory tract including tracheostomy/laryngostoma with suction/manipulation
- Chest Physiotherapy, under certain conditions
- Endoscopy

- High frequency ventilation
- Maternal Labor, stage 2
- NG tube placement and/or manipulation
- Pulmonary Function Testing
- TTE/Echo cardiograms
- Venturi Mask

More COVID-19 Information and Resources

Stay up-to-date on the current COVID-19 situation in Washington, Governor Inslee's proclamations, symptoms, how it spreads, and how and when people should get tested. See our Frequently Asked Questions for more information.

A person's race/ethnicity or nationality does not, itself, put them at greater risk of COVID-19. However, data are revealing that communities of color are being disproportionately impacted by COVID-19- this is due to the effects of racism, and in particular, structural racism, that leaves some groups with fewer opportunities to protect themselves and their communities. Stigma will not help to fight the illness. Share accurate information with others to keep rumors and misinformation from spreading.

- WA State Department of Health 2019 Novel Coronavirus Outbreak (COVID-19)
- WA State Coronavirus Response (COVID-19)
- Find Your Local Health Department or District
- CDC Coronavirus (COVID-19)
- Stigma Reduction Resources

Have more questions about COVID-19? Call our hotline: **1-800-525-0127,** Monday – Friday, 6 a.m. to 10 p.m., Weekends: 8 a.m. to 6 p.m. For interpretative services, **press #** when they answer and **say your language.** For questions about your own health, COVID-19 testing, or testing results, please contact a health care provider.

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email civil.rights@doh.wa.gov.